Applicants submit that these formal drawings should overcome any outstanding objections cited by the Examiner or the Draftsperson in Paper No. 3.

Claims 1-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (U.S. 6,005,646). Applicants respectfully traverse this rejection because the cited reference neither discloses nor suggests that a common voltage, which is substantially equal to a central voltage of an alternate-current driving voltage signal, is applied to the auxiliary electrode, which are features of claims 1 and 8 of the present invention. In fact, the Examiner has even recognized on pages 2-3 of Paper No. 3 that Nakamura does not teach these features of the present invention.

Nakamura discloses a voltage application driving method for a liquid crystal display ("LCD") device. This driving method utilizes a bend alignment mode of liquid crystal molecules (also known as the "OCB mode"). In an LCD device utilizing OCB mode, the alignment of liquid crystal molecules must be changed from the splay mode to a bend mode at the start of operation of the device. A large voltage must be applied to the LCD device between the pixel electrode and the common electrode to cause this alignment change of the liquid crystal molecules. Nakamura teaches the use of high voltages in its device. Nakamura specifically teaches that the signal voltage V_S is at least ten volts greater than the counter electrode voltage V_{com}, and preferably twenty volts greater. (See col. 4, lines 40-44). Nakamura further teaches that the gate voltage V_G is at least ten volts greater than V_S and preferably twenty volts greater. (See col. 4, lines 29-32). Thus, Nakamura teaches that the gate voltage is at least twenty volts higher than the common voltage, and preferably forty

volts higher. Nakamura even specifically teaches that the gate electrode voltage V_G should be "high." (Col. 4, line 36). Nakamura therefore only teaches a high voltage display device, and nowhere does Nakamura teach or suggest the central voltage which is substantially equal to the common voltage.

In contrast, independent claims 1 and 8 of the present invention recite, among other things, that a common voltage, which is substantially equal to a central voltage of an alternate-current driving voltage signal, is applied to an auxiliary electrode. Claims 1 and 8 further recite that the auxiliary electrode is disposed so as to induce a lateral electric field between the auxiliary electrode and a conductor pattern. As discussed above, the Examiner has even recognized in Paper No. 3 that Nakamura fails to teach these features of the present invention. The Examiner asserts, nevertheless, that the general voltage application method taught by Nakamura, coupled with Nakamura's brief mention of "an effective electric field," somehow served to suggest these features of the present invention. However, these teachings of Nakamura are hardly analogous to the features of the present invention.

As discussed above, Nakamura discloses only three voltages (V_G, V_S, and V_{com}) for its voltage driving method. Nakamura teaches that these voltages are separated by a minimum of ten volts each. Accordingly, nowhere does Nakamura thus teach or suggest a voltage substantially equal to the common voltage. Furthermore, Nakamura even teaches that it is preferable to separate the disclosed voltages by at least twenty volts each. By this teaching, Nakamura actually teaches away from having a voltage substantially equal to, or

even relatively near, the common voltage. Because Nakamura here teaches away from the present invention, the Section 103 rejection based on Nakamura is respectfully traversed.

Moreover, Nakamura fails to teach or suggest the production of an electric field between the auxiliary electrode and the conductor pattern. Nakamura only teaches that *between the gate electrode and the signal electrode* is applied a voltage sufficient to provide "an effective electric field to bend alignment." (Col. 4, lines 29-35). As discussed above, Nakamura teaches that this electric field must be at least ten volts, and preferably twenty volts. Such a high voltage electric field between the gate electrode and the signal electrode in Nakamura does not teach or suggest the electric field between the auxiliary electrode and the conductor pattern in the present invention. The two electric fields appear between different elements, and are of different levels, and therefore cannot be analogous. For at least these additional reasons, the Section 103 rejection based on Nakamura is respectfully traversed.

The problem faced and solved by the present inventors should be considered as well, before making a determination based on obviousness. The present inventors have discovered noticeable flicker in images along part of the auxiliary electrode, and that this flicker was caused as a result of a large lateral electric field between the data bus line and the auxiliary electrode. To solve this problem the present invention has applied a common voltage to the auxiliary electrode which is substantially equal to a central voltage of the alternate-current driving voltage signal. By doing so, the present invention is able to eliminate appearance problems of different disclination states at the positive and negative

voltage phases, as well as associated problems related to the flow of liquid crystal molecules related to different disclination states and defective representation caused by such flow. These patentable features of the present invention could not be obvious from Nakamura, when Nakamura fails to even address the problem faced and solved by the present inventors with these features. Accordingly, for these reasons as well, the Section 103 rejection based on Nakamura is further traversed.

For all the foregoing reasons, Applicants submit that this Application, including claims 1-16, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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